

# Daily GLOWBUGS

## Digest: V1 #1

via AB4EL Web Digests @ SunSITE

Purpose: building and operating vacuum tube-based QRP rigs

[AB4EL Ham Radio Homepage @ SunSITE](#)

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%%%% GlowBugs %%%%% GlowBugs %%%%% GlowBugs %%%%% GlowBugs %%%%%

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Subject: glowbugs V1 #1  
glowbugs                      Wednesday, April 9 1997                      Volume 01 : Number 001

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Date: Mon, 07 Apr 1997 11:07:38 -0500  
From: Conard Murray <ws4s@InfoAve.Net>  
Subject: Who wants the list in digest form?

I know that several of you were wanting the list in digest format. We are finally getting to setting up the digest, so send me a note if you want to be included there. Let me know if you want the digest only or if you want both the digest and the list.

73,  
Conard

- - - - -

Conard Murray WS4S      Glowbugs listowner      ws4s@infoave.net  
217 Dyer Avenue      Cookeville, TN 38501      615-526-4093  
Member Arizona ScQRPions QRP-L #993 Friend to anything TCS or GRC-19  
                         <>< Wise men still seek Him ><>  
WIMPS: Qs=000 30m=0 17m=0 12m=0 States=00/00/00

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Date: Mon, 07 Apr 1997 18:18:46 +0200  
From: Jan Axing <janax@li.icl.se>  
Subject: Re: good pencil tube choice for regen rx?

rdkeys@csemail.cropsci.ncsu.edu wrote:

>  
>  
> > I found a pair of sockets and figure it's time for the pocket  
> > SW regen on batteries.  
> > Looking for tube suggestions.  
> >  
> > -bob  
> >  
>  
> There is a dual triode in a submini flat bottle with wire leads or in a  
> round pencil sized bottle with wire leads. It is a 6000 series tube.  
> The 1AD4 would be pretty good also, and that was used by the tons in  
> early Motorola FM gear, so it is still about in the vhf junk bins.  
>  
> Bob/NA4G

What a curious coincidence! I was just about to post a question about tubes... one of them is 1AD4! Here is what I had written when Bob's reply arrived.

Fellows!

I have a lot of tubes in my junk box and data on almost all. There are a couple of tubes I can't find data on, 1AD4 and 5A6. 1AD4 is a pencil tube and 5A6 a 9 pin mini. The 5A6 looks like a direct heated pentode of some kind. Does anyone have any data on these?

TIA ES 73  
- --  
Jan, SM5GNN  
Linköping, Sweden  
janax@algonet.se

janax@li.icl.se

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Date: Mon, 7 Apr 1997 13:44:51 -0400 (EDT)  
From: rdkeys@csemail.cropski.ncsu.edu  
Subject: BA/GB QRG TEST QTR

Well, now that the dust has settled, the list is mostly up, and I have had some time to get back on the air and test the various QRG's I opt for the following schedule for the BA/GB Net:

1. 30M --- QRG 10110KHZ QTR 2300Z/0000Z
2. 40M --- QRG 7050KHZ QTR 0100Z/0200Z
3. 80M --- QRG 3579R545KHZ QTR 0300Z
4. 160M --- QRG 1802R500 KHZ QTR 0400Z

Let us try these over the next few days and see how it goes.

That way all hands will have a QRG to play on, and many/most of us have rigs that will hit at least some of the QRG's. If we want to adjust the 30M/160M QRG's that is fine, just let me know and we will see who can get there with what, and make a final decision down the road a bit.

If I am not there, go ahead and call a round. Don't be timid, and shake the bushes for the fellers/gals..... We used to get a dozen checkins, and now it is down to a few of us rusty olden pfartes.

73/ZUT DE NA4G/Bob UP

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Date: Mon, 7 Apr 1997 18:14:50 +0100  
From: Steve Simpson <Steve@chubs.demon.co.uk>  
Subject: Re: 160 meter QRG?

In message <970407091651\_568209807@emout16.mail.aol.com>, EWoodman@aol.com writes  
>By the way, I've got a schematic for an AM plate modulator that uses a  
>couple of either 12AU7's or 12AX7's that doesn't require a choke or  
>transformer for coupling. Just uses one tube section.....break the B+ line  
>to the final a stick it in. Will plate modulate a rig up to around 50W input.  
>Would probably work well on a low power 160 rig.

Ooooooo, I would mind a copy of that CCT, can you point me in the right direction please.

- - -  
Steve "Chubby" Simpson  
Radio/Night Club D.J.  
Steve@chubs.demon.co.uk  
G-QRP Club Member 9631  
Visit Radio World -  
HTTP://www.chubs.demon.co.uk

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Date: Mon, 7 Apr 1997 15:05:16 +0000  
From: "Brian Carling (Radio G3XLQ / AF4K)" <bry@mnsinc.com>  
Subject: Re: 160 meter QRG?

Eric, that sounds like a most unusual design!  
Straight through the 12AU7? Amazing. I didn't know you could do that.  
I don't see how it could adequately modulate a 50 W rig to 100% mod with a 2-3 watt tube!

I am going to look into a scheme whereby you use the primary of an output transformer to AM modulate a final p.a. using the B+ (or HT to us Brits) to the center-tap - or to an offset tap on a mult-match xfmr, so that the turns ratio is 1.4:1 on either side of the tap. One side goes to the mod & one to the p.a.

That way, the DC component in the winding cancels out and you can run quite a bit more power than the xfmr is rated for!

This scheme, I am told by G3UUR has been used for excellent 100% plate/anode modulation scheme using identical tubes. Since the mod only needs to run at half the power of the p.a. RF final, then xfmr ratio divides it up just right.

What think ye Glowbugges?

The bands are hot, the bottles they be a' glowin' brightly, an' the regeneration be on the ragged edge! Grapples ye up yer tin cans atops yer noggins, an readys ye yer carbon mikes at the fore!

On 7 Apr 97 at 9:16, EWoodman@aol.com spoke about Re: 160 meter QRG? and said:

```
> >There ARE somewhere some rocks for 160m.
>
> >I bought 2 or 3 of them at the fest this weekend in HC6/U holders.
>   Couldn't you do it with a VFO?
>
> Yes, a vfo would probably be better and building a fairly stable one
> for 160 isn't really a big problem. Just an extra stage and a few
> more parts. It's just that crystal control is simple and seeing as
> how you usually stick to pretty much one or two freqs on a band for
> AM I don't mind using a crystal. Too bad that 1.843 computer rock is
> in the wrong part of the band!
>   By the way, I've got a schematic for an AM plate modulator that
>   uses a
>   couple of either 12AU7's or 12AX7's that doesn't require a choke or
>   transformer for coupling. Just uses one tube section.....break the
>   B+ line to the final a stick it in. Will plate modulate a rig up to
>   around 50W input. Would probably work well on a low power 160 rig.
>
> Eric      KALYRV
>
*****
*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *
** E-mail to: bry@mnsinc.com *
*** See the great ham radio resources at: *
** http://www.mnsinc.com/bry/ *
*****
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Date: Mon, 7 Apr 1997 15:05:17 +0000  
From: "Brian Carling (Radio G3XLQ / AF4K)" <bry@mnsinc.com>  
Subject: Re: Rocks

Sounds mighty mighty expensive Walter.

Does anyone know what they would charge us for FT243 rocks cut for the 160m band??

I didn't think anyone even had any quartz that thick left any more!!

Bry, AF4K

bry@mnsinc.com

On 7 Apr 97 at 10:15, Walter L. Marshall spoke about Rocks and said:

```
> Dear Bottle Lovers,
> Everyone's looking for rocks. I'll ask the obvious.
> Why don't you try Jan Crystals for your 180 meter rocks?
> Their phone and address is in the handbook.
>   Walter
>
>
*****
*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *
** E-mail to: bry@mnsinc.com *
*** See the great ham radio resources at: *
** http://www.mnsinc.com/bry/ *
*****
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Date: Mon, 07 Apr 1997 13:27:51 -0500  
From: Conard Murray <ws4s@InfoAve.Net>  
Subject: test

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Date: Mon, 7 Apr 1997 12:22:44 -0700  
From: [torell@sicom.com](mailto:torell@sicom.com) (Kent Torell)  
Subject: AES tube flyer

Looking at the latest flyer from AES here in Arizona....they have a LOT of number 30 tubes for \$1.00 each. The number is 30AE3/PY88 ... so what's all the other letters for? Number 32 tubes at \$3.00.

Kent Torell [torell@sicom.com](mailto:torell@sicom.com) 602-607-4852  
SICOM 7585 E. Redfield, #202 Scottsdale, AZ 85260  
AB70A scQRPion 6,qrp-1 57,ARCI 9075 DM33xn 33.55 N 112.078 W

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Date: Mon, 07 Apr 1997 14:58:03 PDT  
From: "Jeff Duntemann" <[jeffd@coriolis.com](mailto:jeffd@coriolis.com)>  
Subject: Crystal beat box for 160m work

Hi guys--

Maybe this is just a wild idea. Maybe it could work.

I have quite a number of out-of-band FT243 crystals, anywhere from 2 Mhz up to 9 Mhz. It seems to me that if I hunted around I could find a fair few for which the difference would fall within 160m. What would be the simplest approach to a one-tube "oscillator" that actually beat two rocks against one another and peaked the difference frequency? I would guess there's a tube somewhere containing two triodes and a pentode. Two pierce oscillators and a mixer, then provide a peaking circuit to select the difference frequency from the mixer output.

Is this nuts, or could it be done? I seem to recall that the very first synthesizers started out with schemes like this, and just got more and more elaborate.

- --73--

- --Jeff Duntemann KG7JF  
Scottsdale, Arizona

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Date: Mon, 7 Apr 1997 16:32:11 -0600  
From: "Deane D McIntyre" <[dmcintyr@imap1.acs.ualgary.ca](mailto:dmcintyr@imap1.acs.ualgary.ca)>  
Subject: Re: AES tube flyer

In message <v02130503af6ef9375ea6@[192.91.202.41]> Kent Torell writes:  
>  
> Looking at the latest flyer from AES here in Arizona....they have a LOT of  
> number 30 tubes for \$1.00 each. The number is 30AE3/PY88 ... so what's all  
> the other letters for? Number 32 tubes at \$3.00.

The 30AE3/PY88 is a 9 pin miniature tube with cathode (not plate!) cap used as a booster diode in series string (transformerless) TV sets. Filament voltage, 30; filament current 300 mA. Not likely to be of much use in GB projects I suspect. 30AE3 is the EIA designation; PY88 the European one.

I will get my flyer in a few days I suppose....will look with interest for oddball tubes, cheap, of potential GB interest and will report back to the list, as I did with the previous flyer.

73, Deane D McIntyre VE6BPO  
[dmcintyr@acs.ualgary.ca](mailto:dmcintyr@acs.ualgary.ca)

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Date: Tue, 08 Apr 1997 15:44:13 -0700  
From: Dave <[gekko95@ix.netcom.com](mailto:gekko95@ix.netcom.com)>  
Subject: Email suggestion

Hi gang,

I wonder if I might make a small suggestion. When sending an email

to the list that is a reply to a previous message, try to make an effort to update the subject line unless it is clearly a continuation of the same thread.

I, and I'm sure others, subscribe to a number of lists and sometimes I don't read everything I get due to the volume of activity. Thus, if a subject got changed in the evolution and now is actually a new topic, I'd be less likely to skip it.

An example would be the '160m QRG' thread that is now discussing VFO construction (VERY interesting thread, I might add. I like the idea of using oddball rocks to build a heterodyne rock-bound oscillator). But since I don't operate any GB or BA gear on 160 at this time, I often don't read that thread. I know I know - I should change MY ways :)

Just my .72 Indian Rupees (2 cents at current exchange rates - not responsible for market fluctuations)

Dave WB7AWK

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Date: Mon, 7 Apr 1997 17:51:14 -0500 (CDT)  
From: mjsilva@ix.netcom.com (michael silva)  
Subject: Re: AES tube flyer

In message <v02130503af6ef9375ea6@[192.91.202.41]> Kent Torell writes:  
>  
> Looking at the latest flyer from AES here in Arizona....

Wow, two flyers already in 1997! I thought I'd have to wait 'till summer for the next one. Must be a glut of tubes on the market!

73,  
Mike, KK6GM

---

Date: Mon, 07 Apr 1997 16:14:13 PDT  
From: "Jeff Duntemann" <jeffd@coriolis.com>  
Subject: Re: AES tube flyer

At 04:32 PM 4/7/97 -0600, you wrote:

>I will get my AES flyer in a few days I suppose....will look with  
>interest for oddball tubes, cheap, of potential GB interest and  
>will report back to the list, as I did with the previous flyer.

Unless I misrecall from the flyer (which is at home), the ever-useful 6T9 is on sale for \$1.30. You can't even get a burger for that nowadays.

Another item worth pointing out is the 829B for \$10.50. This is a great 90W tube useful up to VHF, especially in push-pull finals.

- --73--

- --Jeff Duntemann KG7JF  
Scottsdale, Arizona

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Date: Mon, 7 Apr 1997 16:17:48 -0700  
From: dfrancis@access.usa.net (Dexter Francis)  
Subject: Re: Crystal beat box for 160m work

Jeff Dunteman writes:  
>I would guess there's a tube somewhere containing two triodes and a pentode."

Right you are, the 6AS11 is a Dual Triode/Sharp Cutoff Pentode.

- -df

\* CWest Tube Sales - P.O. Box 22443 SLC, UT 84122 \*  
\* (801) 363-TUBE voice/fax, E-mail: tubes@usa.net \*  
\* For a current listing of New and Used Tubes try \*  
\* [http://www.usa.net/~dfrancis/CWest\\_Tube\\_Sales.html](http://www.usa.net/~dfrancis/CWest_Tube_Sales.html) \*

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Date: Mon, 7 Apr 1997 14:37:27 -1000  
From: Jeffrey Herman <jeffreyh@hawaii.edu>  
Subject: Re: Crystal beat box for 160m work

Hey, I tried to start a thread about this last week, but no one took the bait. I had found two xtals whose sum landed in 30m.

I agree with Bry, though - 160m is low enuf that a stable vfo could be constructed pretty easily.

I hope you guys living near the ocean have searched your local harbor in search for an old 2 Mc AM marine band transceiver.. These were usually hybrids with a solid state rcvr and a couple tubes in the xmtr. Don Mertz on BA had one for sale, as have others. I can't think of an easier way to get on 160m AM than converting one of those rigs.

In the mid 70s when that band went from AM to SSB, these radios could be found by the dozens in harbor and radio shop dumpsters.

Place a want-ad in BA and .swap if you're interested in getting one.

Jeff KH2PZ

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Date: Fri, 04 Apr 1997 23:26:03 -1000  
From: "Peter L. Demmer" <ampruss@hits.net>  
Subject: Re: test

Aloha nui ka ko Peter KH6CTQ

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Date: Mon, 07 Apr 1997 16:19:09 -1000  
From: "Peter L. Demmer" <ampruss@hits.net>  
Subject: Re: good pencil tube choice for regen rx?

Jan;  
1AD4= Sharp-Cutoff RF/AR Pentode 1.25VDC at .100 ma Htrs, 45VDC Sg & PL at 3 ma and .8 ma. respectively.  
PINS (as counted from right to the left of the paint dot)  
1 = Plate, 3 ma RP 500k  
2 = control grid,.8ma  
3 = Htr & Screen grid  
4 = Control Grid  
5 = Htr.  
Base connection diagram listed as 1AD4, outline as 2-1. Pin 1 (to the left of the painted spot marker. Source; GE tube manual 1964 Aloha, Peter KH6CTQ

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Date: Mon, 7 Apr 1997 22:25:02 -0500 (EST)  
From: "Roberta J. Barmore" <rbarmore@indy.net>  
Subject: 160m riggage

Hi!

I made some comments about 160m rigs on the BA-list & thought to paraphrase 'em here.

In the days before WW II, 160 was a lot like 2m today--open to any class of license and a popular band for local 'phone work. Therefore, you can find circuits for nice 160 AM rigs in most of the prewar HBs; the Jones/E&E one is especially good. Unlike 2m, there wasn't much commercial market for small manufactured pipsqueak 160m transmitters--Gross sold 'em but the big boys didn't offer much. So there was a lot of homebrew!

Looking at nice one on pg 374 of the '39 E&E HB--6C5 Pierce xtal driving a couple of 6L6s in parallel, modulated by P-P 6L6s and a 6K7-6C5 mic amp--and AVC via a diode-connected '56 into the 6K7! Single power supply for the whole thing. 30W out. Mod xfr is a variable-ratio job, which can be found at hamfests--or a pair of vari-ratio plate-to-speaker jobs can be hooked up back to back. (Just use decent-sized wire for the low-Z interconnection!)

In the '41 E&E, there's a fine multi-band job that would simplify down to a 6L6 tuned-plate driving an HY-69 (807 to the hoi polloi), with provision for VFO input. Modulator's not as simple, being 6SJ7-6J5,

transformer-coupled (AES has 'em) to a pair of, oh dear, 6A3s, for which you will have for wrestle slaving audiophiles. This one is a prime candidate for a cathode or screen modulator, or at least something 6L6ish. 40W out, single power supply sort of: two 83s share one plate transformer, each tube with its own filter. ...This'n's a Millen 90800 in all but looks. (And y'know, I'm going to keep an eye peeled for an Eico HF-20 hi-fi amp--make a nice modulator with another transformer externally to get back to plate Z).

Also in the '41 E&E, a very nice ECO. 10W out, covers 160 & 80. 6J5 Hartley, 6V6 untuned buffer, 6L6 o/p and a VR150 regulating the ocs plate. (Nasty typo in the diagram, last time I looked VR tubes really really wanted to see some resistance between them and the B+, and the photos bear that desire out). 10W. Another one you could cathode-modulate, or just use a simple Heising-type modulator. For the latter, a plain ordinary power-supply choke of 4Hy or more will do, so long as it'll pass the plate current of both tubes.

Was hoping to add some dope on \*simple\* cathode modulators--but I can't find the article! \*Thought\* it was Jones (W6AJF) writing in CQ postwar; so far all I find is some dope on screen-grid modulation, (Jan '52) which is fine but not as low-parts. What I remember was a series-tube affair, and could as well have been in QST; in many cathode-keyed rigs, you could get away with plugging it in the key jack! Anybody else recall this one? (This after an hour of scanning old mags--really otta set up a file-card system).

73,  
--Bobbi

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Date: Tue, 8 Apr 1997 10:17:38 -0400 (EDT)  
From: Bjfcjf@aol.com  
Subject: Re: 160m riggage

On 7 Apr. Roberta Barmore wrote:

<< Was hoping to add some dope on \*simple\* cathode modulators--but I can't find the article! \*Thought\* it was Jones (W6AJF) writing in CQ postwar; so far all I find is some dope on screen-grid modulation, (Jan '52) which is fine but not as low-parts. What I remember was a series-tube affair, and could as well have been in QST; in many cathode-keyed rigs, you could get away with plugging it in the key jack! Anybody else recall this one? (This after an hour of scanning old mags--really otta set up a file-card system). >>

See QST for Sept. 1953 Gardner, "The Simplest Modulator"  
also QST for Nov. 1956 Gallamore, "Economy Modulator for the Heathkit AT-1"

I believe these articles describe the cathode modulation circuit Bobbie is thinking of. Similar circuits were also included in several editions of "Hints and Kinks for the radio amateur" published in the 50's and early 60's.

I haven't tried it myself, but have heard that some folks are using a switching power mosfet in series with the final's cathode, adjusting the positive gate bias to supply about half the normal class C cw input current to the final, and feeding the audio through a blocking capacitor directly to the mosfet gate -- but then that isn't pure glowbugging is it ??

In many cases the quality of the modulation acheived with screen grid or cathode modulation leaves much to be desired unless the RF output is sampled, detected, and the recovered audio is used to apply negative feedback to the audio preamplifier.

With negative feedback, they can sound quite good though. A few years ago I heard a drake 2NT modified with cathode modulation and as its owner put it "lots and lots of negative feedback". He was on 40 meters in the AM window during the daytime and although I don't remember his call, his signal quality was indistinguishable from the "bigger-boys" with their higher powered plate modulated rigs. Just my \$0.02 worth. Hope this info is helpful.

73 from Charlie / WA2YOW

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Date: Tue, 8 Apr 1997 09:34:21 -0700  
From: dfrancis@access.usa.net (Dexter Francis)  
Subject: Re: good pencil tube choice for regen rx?

Peter -

I have a large quantity of NOS and used 1AD4's in my inventory, if anyone is interested.  
Check out the web site for pricing. (And I \*am\* negotiable on pricing...!)

- -df

\* CWest Tube Sales - P.O. Box 22443 SLC, UT 84122 \*  
\* (801) 363-TUBE voice/fax, E-mail: tubes@usa.net \*  
\* For a current listing of New and Used Tubes try \*  
\* [http://www.usa.net/~dfrancis/CWest\\_Tube\\_Sales.html](http://www.usa.net/~dfrancis/CWest_Tube_Sales.html) \*

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Date: Tue, 8 Apr 1997 09:56:23 -0700 (PDT)  
From: JMcAulay <jmc@QNET.COM>  
Subject: AM, cheap but clean

>On 7 Apr. Roberta Barmore wrote:

>  
> << Was hoping to add some dope on \*simple\* cathode modulators--but I can't  
>find the article! \*Thought\* it was Jones (W6AJF) writing in CQ postwar;  
>so far all I find is some dope on screen-grid modulation, (Jan '52) which  
>is fine but not as low-parts. What I remember was a series-tube affair,  
>and could as well have been in QST; in many cathode-keyed rigs, you could  
>get away with plugging it in the key jack! Anybody else recall this one?  
>(This after an hour of scanning old mags--really otta set up a file-card  
>system). >>

Following which, Charlie replied:

> See QST for Sept. 1953 Gardner, "The Simplest Modulator"  
>also QST for Nov. 1956 Gallamore, "Economy Modulator for the Heathkit  
>AT-1"  
>  
> I believe these articles describe the cathode modulation circuit Bobbie  
>is thinking of. Similar circuits were also included in several editions of  
>"Hints and Kinks for the radio amateur" published in the 50's and early 60's.  
>  
> I haven't tried it myself, but have heard that some folks are using a  
>switching power mosfet in series with the final's cathode, adjusting the  
>positive gate bias to supply about half the normal class C cw input current  
>to the final, and feeding the audio through a blocking capacitor directly to  
>the mosfet gate -- but then that isn't pure glowbugging is it ??  
>  
> In many cases the quality of the modulation acheived with screen grid or  
>cathode modulation leaves much to be desired unless the RF output is sampled,  
>detected, and the recovered audio is used to apply negative feedback to the  
>audio preamplifier.  
> With negative feedback, they can sound quite good though. A few years  
>ago I heard a drake 2NT modified with cathode modulation and as its owner put  
>it "lots and lots of negative feedback". He was on 40 meters in the AM  
>>window during the daytime and although I don't remember his call, his signal  
>quality was indistinguishable from the "bigger-boys" with their higher  
>powered plate modulated rigs. Just my \$0.02 worth. Hope this info is  
>helpful.  
>  
>73 from Charlie / WA2YOW

Hi, all:

Well, sorry this took so long, but somehow it was a chore to locate it. In my treasure-trove of moderately-old (younger than I am) reference books, I finally located what I wanted. It's on page 250 of the 1956 Handbook and it's called "A Simple Grid Modulator." Simple is hardly the word for it... "almost not there" seems more appropriate. This thing has one 6SL7 speech amp, plus one 6Y6 for each 200 ma of PA cathode current (well, the article says "plate current," but let's be safe). It requires 6.3-volt input, but the B+ (HT for you G folks) is all stolen from the PA cathode circuit, so no separate B+ connection is required. And yes, it does plug right into the cathode of any PA "up to the legal limit." Operates by varying the cathode-to-ground voltage on the PA, thus its grid bias. Obviously, the PEAK RF power with this thing in place will be no more than the usual CW power of the final amp, but so what. Your final PA tube may last forever. For that matter, the legal limit for AM was a lot more in 1956 than it is now. Plus, I suspect this little goodie could turn out some absolutely hygienic audio. Anybody want to try it? It's only a one-pager in the Handbook, and I will be tickled pink to make some copies and forward to anyone who sends the customary SASE. BTW, while I'll leave it to someone else for final determination, it appears to me that there's no reason at all to stick with a 6Y6 for the output tube... looks as if a 6L6 would be quite okay, or maybe even a 6V6. Someone ought to take a closer look, unless a



lot more 6Y6s are around than I think.

73  
John WA6QPL@amsat.org

John McAulay  
10207 East Avenue R-12  
Littlerock CA 93543

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          \l/
         (o o)
-----ooO-(_)-Ooo-----
*****
*
* Old age and treachery will always triumph over youth and skill. *
*
*****
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Date: Tue, 8 Apr 1997 10:05:48 -0700  
From: dfrancis@access.usa.net (Dexter Francis)  
Subject: .... .. <Hi Hi>

I suppose I ought to introduce myself to the list, as my subscription has obviously kicked in.

Dexter Francis, N0YLJ, here. Some of you may know me from the BA list. My interests are varied, as my meger collection of radios would attest. Currently it includes a Drake SPR-4 (I know, it's Solid State...) Collins 51S-1, Hallicrafters S-38D, S-53 and SX-62, Magnavox RAK-8, and a Utah cathedral radio. Test gear includes a HP 1715 Scope, 140T, 606B and a Hickock 752 tube checker. I also have a Collins 32S-3 and the power supply, but don't have a decent antenna up yet, so I mostly listen these days. I've also started a small collection of odd military stuff. I tend toward the unusual or very well designed gear, as my professional trade is a product designer and I'm fascinated to see how things were put together. Present day job is heading up the mechanical piece of the wireless product design group for U.S. Robotics Mobile Communication Division in Salt Lake.

I also have a large collection of vacuum tubes and related parts - sort of running a small business on the side - which I'm mostly trying to just keep available to the BA/Glowbug list members. Those of you who have tube needs might find it useful browsing my Web site. I'm generally negotiable and often open to trades on tubes and equipment. I can also help locate the occasional oddball tube that isn't on the list. My pricing is generally 1/3 to 2/3 below AES. (Not flea market, but better than retail.)

The contents of the web site are being updated as I unpack and re-inventory the collection. So, if it's not there today, it may be there a few days later. I also have several tube reference books and am more than happy to provide technical data and copies of tube specs.

I'm not as technical as Hank Van C, or as deep into the profession and Bobbi, but really love these old radios and am committed to preserving them and keeping them running.

So, I'm glad to be here and looking forward to the traffic.

- df

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* CWest Tube Sales - P.O. Box 22443 SLC, UT 84122 *
* (801) 363-TUBE voice/fax, E-mail: tubes@usa.net *
* For a current listing of New and Used Tubes try *
* http://www.usa.net/~dfrancis/CWest_Tube_Sales.html *
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Date: Tue, 8 Apr 1997 10:07:00 -0700  
From: "Bowman, Jim" <Jim\_Bowman@ATK.COM>  
Subject: cathode modulator

I definitely remember such a simple cathode modulator. In fact a friend of mine built and used one in our earlier days in the 50's. It used a 6L6 or 6K6 or something like that, I think. It seems to me it was in one of the ARRL handbooks about that time. I would assume if such a modulator was used, you would want to use it in the cathode circuit of the amp only, and if the rig keyed both the osc and amp, you would want to separate the osc cathode return. Be aware that these modulator schemes (screen, cathode) result in reduced output from the transmitter. Simple circuits, but that's the compromise. I think they also wanted tight antenna coupling or loading. I do know the circuit (the Golden Gate) I used in the mobile rig I described in an earlier post worked like a champ.

Anyway, the cathode modulator circuit Roberta describes has been haunting my memory for some time, during all the discussions on the subject. I still e-mail my old buddy in Texas that built it. I will ask him what he remembers about it. Anyway Roberta, you are not the only one who remembers that circuit.

BTW, in the packet of circuits I sent to Brian to scan and post on the web, there was a simple modulator circuit included in the article titled "Two Tube Mobile Transmitter". I'm sure this circuit could be adapted to other rigs. Brian is posting the articles (see my earlier post for list) at <http://www.chubs.demon.co.uk/valve.htm> That is Steve Simpson's page in England, according to Brian. I visited the site and they look pretty good so far. The photos aren't too good, but that seems to be a common problem.

73 to all,  
Jim W7HPK  
Jim\_Bowman@ATK.COM

-----  
**From:** Roberta J. Barmore  
**To:** glowbugs!  
**Subject:** 160m riggage  
**Date:** Mon, Apr 7, 1997 8:25PM

Hi!

I made some comments about 160m rigs on the BA-list & thought to paraphrase 'em here.

I<SNIPPO>

Was hoping to add some dope on \*simple\* cathode modulators--but I can't find the article! \*Thought\* it was Jones (W6AJF) writing in CQ postwar; so far all I find is some dope on screen-grid modulation, (Jan '52) which is fine but not as low-parts. What I remember was a series-tube affair, and could as well have been in QST; in many cathode-keyed rigs, you could get away with plugging it in the key jack! Anybody else recall this one? (This after an hour of scanning old mags--reallyotta set up a file-card system).

73,  
--Bobbi

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**Date:** Tue, 8 Apr 1997 11:59:55 +0100  
**From:** Steve Simpson <[Steve@chubs.demon.co.uk](mailto:Steve@chubs.demon.co.uk)>  
**Subject:** Heathkit Cheyenne??

Hi all, Can anyone help?

I have been offered a Heathkit Cheyenne MT-1 shortwave transmitter and Heathkit HP-13 power supply for \$100. I don't know anything about them. Can anyone inform me of it's weight as I have to ship it to the U.K. Also is \$100 a good price or should I forget the whole thing and look for something a bit nearer.

Regards.  
--  
Steve "Chubby" Simpson  
Radio/Night Club D.J.  
[Steve@chubs.demon.co.uk](mailto:Steve@chubs.demon.co.uk)

G-QRP Club Member 9631  
Visit Radio World -  
HTTP://www.chubs.demon.co.uk

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Date: Tue, 8 Apr 1997 14:26:54 -0500 (CDT)  
From: mjsilva@ix.netcom.com (michael silva)  
Subject: Re: Crystal beat box for 160m work

Jeff wrote:

>... What would be the  
>simplest approach to a one-tube "oscillator" that actually beat two  
>rocks against one another and peaked the difference frequency?

I wonder if a regular old pentagrid converter would do the trick. The question is whether you could get the 'signal-grid' circuit to oscillate at F2 while being fed with the F1-modulated cathode-current stream.

BTW, I've wondered whether a similar arrangement mightn't work using a combination of computer clock crystals (or misc. junk-box orphans) and CB crystals. The combination would be cheap, easy to obtain and would provide 10kHz "channel" spacing (except for the occasional skipped slot).

73,  
Mike, KK6GM

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Date: Tue, 8 Apr 1997 12:28:38 -0700 (PDT)  
From: JMAulay <jmc@QNET.COM>  
Subject: Re: AM, cheap but clean

In earlier posting (Tue, 8 Apr 1997 09:56:23 -0700 (PDT), I offered:

>It's on page 250 of the 1956 \_Handbook\_ and  
>it's called "A Simple Grid Modulator."  
>It's only a one-pager in the  
>\_Handbook\_, and I will be tickled pink to make some copies and forward to  
>anyone who sends the customary SASE.

Not completely thoughtful of me, I'm afraid For those outside the US, just send one or two IRCs (as you feel disposed to do). I'll take care of the envelope and such.

73  
John WA6QPL@amsat.org

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Date: Tue, 8 Apr 1997 12:38:00 -0700  
From: "Bowman, Jim" <Jim\_Bowman@ATK.COM>  
Subject: Toobs

I just got a few oldies on trade, including a '01A in box, but I doubt if it is new. I also got a couple of 471-B toobs in boxes, but I can't seem to find them listed in my old 1939 radio handbook. The box has information printed on it as follows:

471-B Power Amplifier  
Genuine Audion  
De Forest The Father of Radio  
De Forest Radio Co.  
Jersey City, N.J.

Fil 5V  
A .25  
Plate 180  
(Maximum)

It is a 4-pin toob.

Does anyone have any info on pinouts? Suggestions for use? I suppose the pair could make a regen with 1 stage audio.

Don'tcha just love this old stuff??

73,  
Jim W7HPK  
Jim\_Bowman@ATK.COM

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Date: Tue, 8 Apr 1997 18:45:44 +0000  
From: "Brian Carling (Radio G3XLQ / AF4K)" <bry@mnsinc.com>  
Subject: Relay needed

Needed - mercury wetted relay for cathode keying tube rigs!

What do you have in the junque boxes out there????

Please e-mail me:

bry@mnsinc.com

Thanks & 73 de AF4K Bry

\*\*\*\*\*  
\*\*\* 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA \*  
\*\* E-mail to: bry@mnsinc.com \*  
\*\*\* See the great ham radio resources at: \*  
\*\* http://www.mnsinc.com/bry/ \*  
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Date: Tue, 8 Apr 1997 18:46:53 +0000  
From: "Brian Carling (Radio G3XLQ / AF4K)" <bry@mnsinc.com>  
Subject: Re: 6T9 and 6GW8 xmtrs!!!

Just wondering if everyone else has lost interest in making these?

On 7 Apr 97 at 8:40, Brian Carling (Radio G3XLQ / spoke about 6T9  
and 6GW8 xmtrs!!! and said:

> - --- Great article Jeff, and glad to see what you came up with.  
>  
> I've been enjoying reading the articles on these tri-tet 1-tube xmtrs  
> here.  
>  
> I am looking forward to building & setting up either a 6GW8 or a 6T9  
> in this type of circuit. I have three different designs of the rig  
> that I am postng on my web pages for everyone to see.

---

Date: Tue, 8 Apr 1997 17:14:15 -0600 (MDT)  
From: toyboat@freenet.edmonton.ab.ca  
Subject: AM Modulators, 160 metres, etc.

Hello All,

All this talk about 160 metres, AM rigs, and simple modulators sort  
of started me digging into my pile of photocopies again.

I lost track of exactly what the original goal was, but I believe it was  
to get a simple modulator going with minimum unobtainables.

Someone may have discussed this circuit earlier, but it's worth a second  
mention, I think. It's a 25 Watt, 160 metre, 4 tube AM rig with  
Pi-output, crystal control, and simple construction.

It uses two 6C5's (or 6J5's) as crystal oscillator and 1st stage audio,  
and two 6L6's as RF power amplifier stage and 2nd stage audio/modulator.  
B+ is 400VDC and 200VDC.

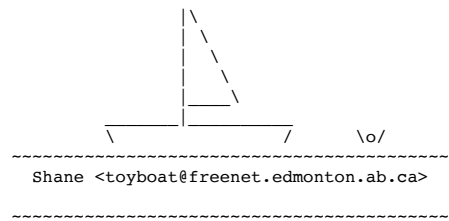
Most interesting is the modulation transformer. It isn't. It's a  
common 20H/150mA power supply filter choke. I suppose it could also be  
a filament transformer primary or something along that theme.

One thing is that you need a carbon mike and carbon mike transformer.  
I'm not sure what's available or what would sub for the trafo..  
Any ideas?

If anyone is interested, e-mail me and I'll give you more info, or  
get you to send me a SASE for the schematic.

Regards

Shane Wilcox



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End of glowbugs V1 #1  
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%%%% GlowBugs %%%% GlowBugs %%%% GlowBugs %%%% GlowBugs %%%%

[AB4EL Ham Radio Homepage @ SunSITE](#)

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Created by **Steve Modena, AB4EL**  
Comments and suggestions to **modena@SunSITE.unc.edu**

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